

## Claims

- [1] A method of transmitting a signal in a distributed BTS (Base Transceiver Station) system comprising a BTS main unit and BTS RF units, said method comprising the steps of:
- generating a signal for mobile communication at the BTS main unit;
  - converting the signal into a intermediate frequency signal and outputting the converted signal from the BTS main unit;
  - receiving the outputted signal from the BTS main unit at an E/O (Electrical/Optical) converter, converting the received signal into a first optical signal, and transmitting the first optical signal to a first BTS RF unit;
  - converting the transmitted signal into an electrical signal using an O/E (Optical/Electrical) converter, and generating a coupled signal and a main signal from the electrical signal using an RF coupler;
  - transmitting the coupled signal to the first BTS RF unit, converting the main signal into a second optical signal, and transmitting the second optical signal to a second BTS RF unit;
  - separating the transmitted second optical signal into an optical coupled signal and an optical main signal using an optical coupler;
  - transmitting the optical coupled signal to the second BTS RF unit and transmitting the optical main signal to a third BTS RF unit; and
  - converting the optical coupled signal into an electrical signal to be used at the second BTS RF unit, and converting the optical main signal into an electrical signal to be used at the third BTS RF unit.